

Air Force

SBIR

Impact



Smart Target Model Generator

Company:

Applied Research
Associates

Location:

Albuquerque, NM

Employees:

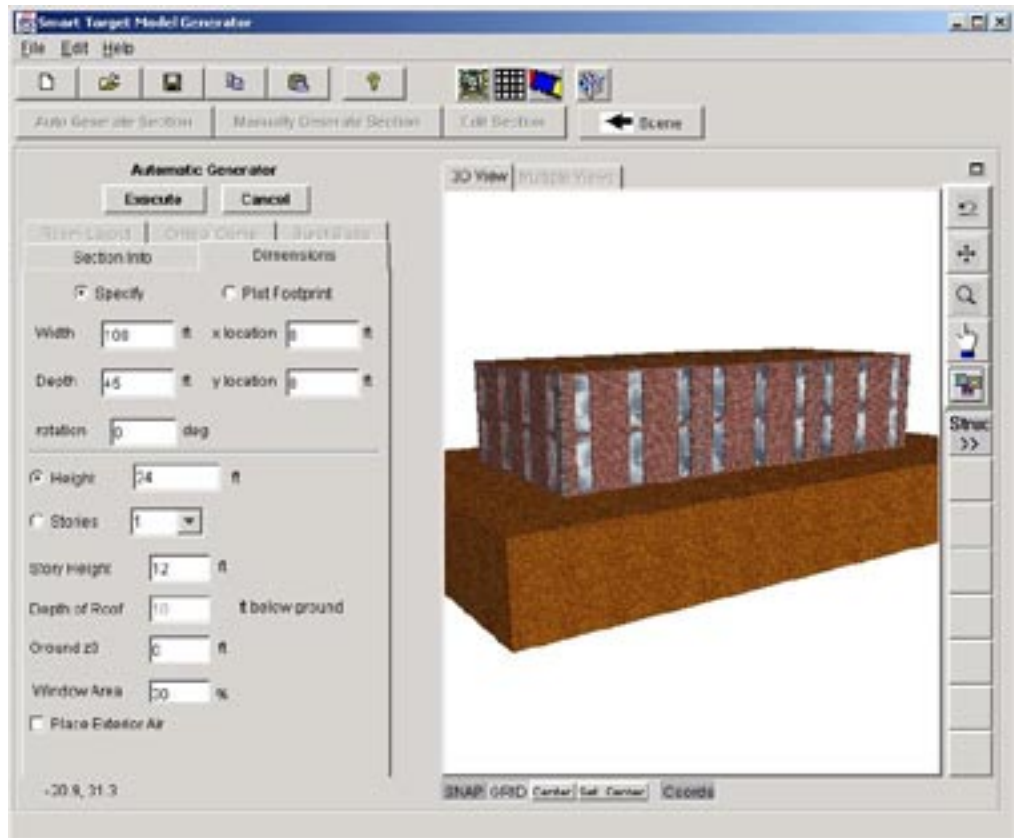
450 at time of award

Principals:

Jimmie L. Bratton and
Cornelius J. Higgins

Project Officer:

Russell Dukes, AFRL
Munitions Directorate,
Eglin AFB, FL



Air Force Requirements:

The Air Force Research Laboratory's (AFRL), Munitions Directorate, Lethality and Vulnerability Branch (AFRL/MNAL) is tasked with providing expeditious weapons effectiveness analyses of several weapons concepts against various types of buildings that may be potential target types. The building model must be generated before weapon effectiveness analysis can be performed against ground-fixed target sets. The Air Force needed target modeling tools that provide rapid target model generation necessary for the required quick turn-around lethality/vulnerability weapon effectiveness simulations.

SBIR Technology:

Applied Research Associates (ARA) was awarded a Small Business Innovation Research (SBIR) contract to develop a 3-D target model generation tool for use in weapon effectiveness evaluation. ARA developed the Smart Target Model Generator (STMG) to aid in rapid generation of target models using engineering rule-bases

**For more information
on this story, contact
Air Force TechConnect
at 1-800-203-6451 or
at [www.afrl.af.mil/
techconn/index.htm](http://www.afrl.af.mil/techconn/index.htm)**

to quickly and automatically create generic buildings based on the building construction type, building function, and dimensions. STMG allows users who are not engineers or architects to rapidly build a structurally valid model while providing the engineering properties needed for weapon effectiveness studies.

Company Impact:

The STMG has grown from a support tool for AFRL/MN to a general purpose building model generator. The initial project was so useful that the market forces have since driven its growth until the software has essentially become the defacto standard for 3-D building models used for weapon effects analysis.

Company Quote:

"Without programs like SBIR, the more risky, but high pay-off projects such as the STMG would not have a chance to get off the ground. With the SBIR program, ARA was able to provide a tool that met the needs for the customer while providing ARA with the potential for long-term revenue and commercialization."

Cornelius J. Higgins and Jimmie L. Bratton, Principals

Air Force Project Officer Quote:

"Use of the Smart Target Model Generator will revolutionize the timeframe over which everyone from weapon developers to weaponeers within the Department of Defense can conduct effectiveness analyses of air delivered weapon systems against ground-fixed targets."

Russell Dukes, AFRL Munitions Directorate, Eglin AFB, FL

SBIR

AF SBIR Program Manager
AFRL/XPTT
1864 4th Street, Room 1, Building 15
Wright-Patterson AFB, OH 45433

AF SBIR Program Manager: Steve Guilfoos
e-mail: stephen.guilfoos@wpafb.af.mil
Website: www.afrl.af.mil/sbir

DSN Fax: 785-2329
T: (800) 222-0336
F: (937) 255-2329



**Air Force
Research Laboratory | AFRL**
Science and Technology for Tomorrow's Aerospace Forces

AF Topic# 98-223
Sec. Rev.# AAC/PA 02-279
Impact Story IS#37.0 – 08/02